1. Transportation Policies on Reducing Congestion

2. Ownership Forms on Efficiency of Airports

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Part 1: Transportation Policies on Reducing Congestion

- In the U.S., road users experience nearly 4 billion hours of annual delay (Schrank and Lomax (2005)).

- A popular policy on reducing congestion is "HOV lanes".

Problems of HOV lanes

- carry fewer people than general-purpose lanes
- attract many family members who would ride together anyhow
- shift some travelers from vanpools or buses to low-occupancy carpools

A Recent Policy Innovation: High-occupancy vehicle/toll (HOT) lanes

California State Route 91 (SR91) HOT Lanes

Efficiency of HOT lanes depends critically on the amount of heterogeneity in travelers' value of time

- Value of time (VoT) measures how much a traveler is willing to pay for time saving (for example: $/hour).

- HOT lanes can be effective in reducing congestion if travelers are very different in their values of time.

Using data from California State Route 91, we found (Small, Winston, and Yan 2005):

- in average, commuters there are willing to pay about $20 to save one hour for their morning commute trip (about 80% of the average wage rate);

- One fourth of the commuters are willing to pay more than $28 to save one hour; one fourth of the commuters are willing to pay at most $8 to save one hour.

- Given such a heterogeneity in value of time, HOT lanes are more efficient than HOV lanes in reducing congestion.

- Intuition to understand above finding: travelers have more options under HOT lanes; those with flexibility to carpool and those with high value of time can choose the express lanes.

On the other hand, experiments on HOT lanes suggest

- Motorists continue to impose high congestion costs on each other because most of the highway is unpriced;

- The express lanes are still underused because a big price differential exists between the two roadways in order to achieve required level-of-service on express lanes.

Toward a Better Policy Compromise

A differentiated pricing scheme that caters to travelers' varying preferences can

- capture some of the efficiency that HOV and HOT policies sacrifice;
- generate welfare disparities that are comparable to HOT lanes.

Part 2: Impacts of Ownership Forms on Airport Efficiency

- Ownership forms of airports in the world can be classified into:
  - Majority private;
  - Mixed enterprise with majority government;
  - U.S. airport authority;
  - Canadian airport authority;
  - U.S. port authority
  - Public corporation;
  - U.S. city/state;
  - Shared multiple government;

Summary of findings

- Countries considering privatization of airports should transfer majority shares to the private sector.
- Mixed ownership of airport with a government majority should be avoided in favor of even 100% government owned public firm.
- U.S. airports operated by port authorities should consider to transfer ownership/management to independent airport authorities.
- Privatization of one or more airports in cities with multiple airports would improve the efficiency of all airports